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EXAMINER

ALEXANDER, JESSE NELSON

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 07/22/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/641,173

Applicant(s)

PARK ET AL.

Examiner

Jesse N Alexander

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 is/are allowed.
- 6) ☒ Claim(s) 2-5,9-11,15-17 and 19-25 is/are rejected.
- 7) ☒ Claim(s) 6-8, 12-14, 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/17/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been received.

Specification

2. The disclosure is objected to because of the following informalities: heading "PRIORITY" and paragraph should be removed. This information should only appear in the Declaration.

Appropriate correction is required.

Drawings

3. Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 21 recites the limitation "the designated channel number" in line 13. There is insufficient antecedent basis for this limitation in the claim.
- Claim 22 recites the limitation "the next slot" in line 3. There is insufficient antecedent basis for this limitation in the claim.
- Claim 23 recites the limitation "the designated channel number" in line 2. There is insufficient antecedent basis for this limitation in the claim.
- Claim 24 depends on claim 21

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 2, 3, 9, 10, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanterakis et al. (2004/0057397 A1).

Regarding claim 2, a base station (BS) device comprising:

- a forward common channel transmitter (**Kanterakis et al. Figure 3., element 330**) for transmitting through a forward common channel (**Kanterakis et al. downlink common-control channel (CCCH) [0026],line 10-13**) an access parameter message (**[0055], lines 8-20**) including preamble duration information and information about a second slot duration having a length of a multiple of a given first slot duration (**Kanterakis et al. [0055], line 5. Downlink parameter message includes information for allowing a mobile station to send an access probe or access-burst signal [0044], lines 7-11 message.**)
- a controller (**Kanterakis et al. Fig. 3, elements 316 and 319**) for examining whether an access probe including a preamble signal having the preamble duration and a succeeding access message is received, beginning at each start time point of slots based on the second slot duration (**See Access Burst timing in Kanterakis et al. Figure 5**).

Regarding claims 3, 10:

- The base station device as claimed in claim 2, wherein the first slot duration is 1.25ms. (**Kanterakis et al. [0044], line 8 1.25 ms slot durations or boundaries**).

- The mobile station device as claimed in claim 9, wherein the first slot duration is 1.25ms. **(Kanterakis et al. [0044], line 8 1.25 ms slot durations or boundaries).**

Regarding claim 9, this claim discloses a mobile station device comprising:

- a forward common channel receiver **(Kanterakis et al. Figure 4., elements 409 through 421)** for receiving through a forward common channel **(Kanterakis et al. downlink common-control channel (CCCH) [0026], lines 10-13)** an access parameter message **([0055], lines 8-20)** including preamble duration information and information about a second slot duration having a length of a multiple of a given first slot duration; **(see [0055], line 5 system parameters from the base station would include information related to the mobile's uplink access message's preamble and message (or pilot signal, as described in the reference) slot durations. See Figure 5 elements labeled "Access Burst").**
- a reverse common channel transmitter **(Kanterakis et al. Figure 4, elements 409, 410, 422-430.)** for transmitting an access probe including a preamble signal **(Kanterakis et al. a mobile (or remote) station sending preamble information to base stations in [0055], line 19 and Figure 4., elements 452)** having the preamble duration and a succeeding access message to a base station over a reverse common channel beginning at one of a plurality of start time points of the slots having the second slot duration **(Kanterakis et al. in Figure 5 discloses the location of uplink access probes or access-burst**

messages on slot start time points based on the forward synchronization signal, as described in [0044], lines 7-11), thereby accessing the base station.

Regarding claim 16, An access communication device for a mobile communication system, comprising:

- **a base station device for transmitting (Kanterakis et al. figure 1, elements BS A, B, and C) an access parameter message ([0055], lines 8-20) including preamble duration information and information about a second slot duration (see [0055], line 5 system parameters from the base station would include information related to the mobile's uplink access message's preamble and message (or pilot signal, as described in the reference) slot durations. See Figure 5 elements labeled "Access Burst"). ([0055], lines 8-20) having a length of a multiple of a given first slot duration, and receiving an access probe including a preamble signal having the preamble duration and a succeeding access message at one of the start time points of slots based on the second slot duration (Kanterakis et al. [0055], line 5. Downlink parameter message includes information that would allow a mobile station to send an access probe or access-burst signal ([0044], lines 7-11) or message.)**
- **a mobile station device for receiving the access parameter message ([0055], lines 8-20), and transmitting (Kanterakis et al. [0055], line 19 and Figure 4., elements 452) the access probe beginning at one of the start time points of the slots based on the second slot duration. (Kanterakis et al. in Figure 5 discloses the timing of uplink access probes or access-burst messages on**

slot start time points based on the forward synchronization signal, as described in [0044], lines 7-11)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4, 5, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanterakis et al. (2004/0057397 A1) in view of applicant's admitted prior art.

Regarding claim 4, Kanterakis et al. discloses a base station device (**figures 1 and 2, elements BS A, B, and C**) as claimed in claim 2, wherein the forward common channel transmitter (**Figure 3, elements 309, 310, 322-330**)

However, Kanterakis et al. does not teach: a base station device transmitting a control message including a designated channel number for a reverse common channel to a mobile station over a forward common channel.

Applicant's admitted prior art teaches a base station device transmitting a control message including a designated channel number for a reverse common channel to a mobile station over a forward common channel (**See Fig. 2, element labeled "CONTROL MSG (WITH CHANNEL DESIGNATION)"**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transmitter of the Kanterakis et al. base station device

of such that it is capable of sending the control message described by applicant's admitted prior art.

The motivation for said modification would be to increase efficiency for packet data transfer in CDMA systems, increase data throughput, and reduce delay as stated in the object of the Kanterakis et al. invention described at [0004] and [0005], respectively.

Regarding claims 5 and 15, Kanterakis et al. teaches a mobile station transmitting to the base station an access probe or burst ([0057], lines 1-3 and [0058], lines 1 and 2), beginning at one of the start time points of the access slot periods (Figure 5 and [0044], lines 7-11)), as a response to control messages from the base station. Kanterakis et al. also teaches that the access probe (or burst) begins at one of the start time points of the slots based on the second slot duration in Figure 5 ("Access Burst").

However, Kanterakis et al. fails to explicitly teach the transmission of an access probe (or burst) over the designated reverse channel associated with the designated channel number from the control message (via a forward channel) as the response to said control message

Figures 2 and 3 of the applicant's admitted prior art teach base and mobile stations device, wherein the mobile station receives a control message and transmits a response message over a designated channel associated with the designated channel number in the control message.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the base station device disclosed in Kanterakis et al. to include the mobile or remote station apparatus of capable of sending the access probes over the channel designated in the downlink control message described in applicant's prior art.

The motivation for said combination being the increase in access channel setup efficiency and throughput as described in the object of the Kanterakis et al. invention at [0004] and [0005].

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanterakis et al. (2004/0057397 A1). Kanterakis et al. discloses a mobile station device with an uplink (or reverse) common packet channel (**Fig 1, element labeled CPCH**)

However, the reference fails to teach that this reverse channel is the reverse common control channel (R-CCCH).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the mobile station uplink channel such that it complies with the requirements for the reverse common control channel (R-CCCH).

The motivation for said modification would have been to comply with the TIA/EIA/IS-95 standards and thereby to support interoperability.

11. Claims 17, 19, 20, 21, 23, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanterakis et al. (2004/0057397 A1) in view of Lee et al. (US 6,674,739 B1).

Regarding claims 17, 19, and 20, Kanterakis et al. discloses a communication method and device implementation of said method between a base station and a mobile station comprising the steps of:

- transmitting to a mobile (or remote) station an access parameter message ([0055], lines 8-20) including preamble duration information and information about second slot duration having a length of a multiple of a given first slot duration;
- determining whether a preamble signal of an access probe is received, by assigning a demodulator (**Fig. 3, element 316**) associated with the designated channel number beginning at each start time point of slot boundaries (**see [0044], line 8**) based on the second slot duration (**see Fig. 5 elements labeled "Access Burst"**); is received on the designated uplink channel at the start time point of slot boundaries based on the second slot duration (**see Fig. 5. time scale at the top marked "1.25 msec."**);
- upon receipt of the preamble signal, receiving a response message for the control message after a lapse of the preamble duration. (**See Figures 6 and 7, elements labeled "Message" and "Data and Control Information", respectively.**)

Kanterakis et al. fails to teach:

- transmitting a control message from the base station to the mobile or remote station containing the designated channel number for a reverse common

channel, and receiving a response message for said control message upon receipt of the preamble signal.

- that the designated channel number is a specific long code number.

Lee et al., however, teaches:

- a BS transmitting a control message to a mobile or remote station including a designated channel number for a reverse common channel, and receiving a response message for said control message after a lapse of the preamble duration in **Figures 11 and 13**.
- That the designated channel number can be identified by the long code (**column 5, lines 15-16 and lines 51-56, and Fig. 13**)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Kanterakis et al. device with the capability of transmitting the control message as taught by Lee et al.

The motivation for said combination being the increase in access channel setup efficiency and throughput as described in the object of the Kanterakis et al. invention at paragraphs [0004] and [0005].

Regarding claims 21, 23, and 24 Kanterakis et al. discloses a communication method and device implementation of said method between a base station and mobile or remote station comprising the steps of:

- receiving from a base station an access parameter message ([0055], lines 8-20) including preamble duration information and information about a second slot duration having a length of a multiple of a given first slot duration, (see [0055],

line 5 system parameters from the base station would include information related to the mobile's uplink access message's preamble and message (or pilot signal, as described in the reference) slot durations. See Figure 5 elements labeled "Access Burst").

- transmitting to the base station a preamble signal for the preamble duration beginning at one of a plurality of start time points of slots based on the second slot duration; **(See Figure 5 elements labeled "Access Burst");**
- The communication method as claimed wherein the first slot duration is 1.25ms. **(See Fig. 5. time scale at the top marked "1.25 msec.");**

Kanterakis et al. fails to teach:

- a mobile (or remote) station receiving from the base station a control message including information about a designated channel for a reverse common channel;
- a mobile (or remote) station that after transmitting the preamble signal, consecutively transmits a response message for the control message to the base station over a designated channel associated with the designated channel number.
- that the designated channel number is a specific long code number.

Lee et al., however, teaches:

- a mobile (or remote) station receiving a control message from a base station including a designated channel number for a reverse common channel, that transmits a response message for said control message after a lapse of the preamble duration in **Figures 11 and 13**

- that the designated channel number can be identified by the long code (**column 5, lines 15-16 and lines 51-56, and Fig. 13**)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Kanterakis et al. mobile (or remote) station device with the capability of receiving the control message and transmitting a response on the designated channel identified by a specific long code as taught by Lee et al.

The motivation for said combination being the increase in access channel setup efficiency and throughput as described in the object of the Kanterakis et al. invention at paragraphs [0004] and [0005].

Regarding claim 25, Kanterakis et al. discloses an access communication method for a mobile communication system, comprising the steps of:

- transmitting to a mobile (or remote) station an access parameter message ([0055], **lines 8-20**) including preamble duration information and information about second slot duration having a length of a multiple of a given first slot duration; (**see [0055], line 5. System parameters from the base station include information related to the mobile's uplink access message's preamble and message (or pilot signal, as described in the reference) slot durations. See Figure 5 elements labeled "Access Burst"**).
- transmitting, in the mobile station, an access probe (**See Figure 5 elements labeled "Access Burst"**) including a preamble signal having the preamble duration and a succeeding response message (**See Figures 6 and 7, elements labeled Power "Ramping Preambles", "Message" and "Data and Control**

Information”, respectively.) beginning at one of a plurality of start time points of slots based on the second slot duration,
after transmitting the control message, determining in the base station whether a preamble signal of the access probe is received, by assigning a
Kanterakis et al. fails to teach:

- a base station transmitting a control message including a designated channel number for a reverse common channel from the base station to the mobile station',
- upon receipt of the control message, transmitting, in the mobile station, an access probe and a succeeding response message over a designated channel associated with the designated channel number
- that the designated channel number is a specific long code number.

Lee et al., however, teaches:

- a mobile (or remote) station receiving a control message from a base station including a designated channel number for a reverse common channel, that transmits a response message for said control message after a lapse of the preamble duration in **Figures 11 and 13**
- that the designated channel number can be identified by the long code (**column 5, lines 15-16 and lines 51-56, and Fig. 13**)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the Kanterakis et al. mobile (or remote) station device

with the capability of receiving the control message and transmitting a response on the designated channel identified by a specific long code as taught by Lee et al.

The motivation for said combination being the increase in access channel setup efficiency and throughput as described in the object of the Kanterakis et al. invention at paragraphs [0004] and [0005].

Allowable Subject Matter

12. Claim 1 allowed.

13. Claims 6, 7, 8, 12, 13, 14, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art listed below discloses processes, methods and/or devices that address claims in the application:

- US 6,577,610 B1 Kronz
- US 6,493,334 B1 Krzymien et al.
- US 20,020,067,701 A1 Chen et al.
- Songson Sun; Krzymien, W.A.; Darian, B.; "A New Efficient Contentionless Access Protocol For Packet Data Transmission In CDMA Systems", Vehicular Technology Conference Proceedings, 15-18 May 2000, IEEE 51st, Volume: 1, Pages 36 - 40.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse N Alexander whose telephone number is (703) 305-8709. The examiner can normally be reached on 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jna

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